NOVIKOV, S.S.; SIOVETSKIY, V.I.; TARTAKOVSKIY, V.A.; SHEVELEV, S.A.; FAYNZIL'BERG, A.A.

On the existence of aci-forms of 1,1-dinitroalkanes and trinitromethane. Dokl. AN SSSR. 146 no.1:104-106 S '62. (MIRA 15:9)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR. Predstavleno akademikom M.I. Kabachnikom.

(Paraffins) (Nitro compounds)

S/062/63/000/001/007/025
B101/B186

AUTHORS: Slovatskiy, V. I., Shevelev, S. A., Yerashko, V. I., Faynzil'berg, A. A., and Novikov, S. S.

TITLE: Spectrometric structural analysis of the salts of 1,1-dinitro alkanes and trinitro methane

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 1, 1963, 57-63

TEXT: A comparative study was made of the IR spectra of the lithium, potassium sodium and ammonium salts of 1,1-dinitro methane, 1,1-dinitro ethane, 1,1-dinitro propane, 1,1-dinitrobutane, 1,1-dinitro pentane, 1,1-dinitro hexane, 1,1-dinitrodecane, and trinitro methane, in order to elucidate their structures. Results: All 1,1-dinitro alkanes have bands at ~1450, ~1210, and ~1120 cm^{-1}, but no bands characterizing the stretching vibrations of N-O in the noncharged NO_2 groups exist in the spectra of any of the compounds. The spectra of the salts show neither the two bands in the region of 800-900 cm^{-1} that are found in free gem-dinitro alkanes, whereof at least one is caused by the stretching vibra-

Card 1/2

PANCHENKOV, G.M.; GORSHKOV, V.I.; SLOVETSKIY, V.I.

Comparative kinetic characteristics of the KU-1, SDV-3, SM-12, and SBS cation exchangers. Kin.i kat. 4 no.1:82-87 Ja-F '63. (MIRA 16:3)

1. Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova, khimicheskiy fakul'tet.

(Ion exchange)

NOVIKOV, S.S.; NIKONOVA, L.A.; SLOVETSKIY, V.I.

Kinetics of the addition of trinitromethane to methyl acrylate. Izv. AN SSSR Ser. khim. no.2:395 '65.

(MIRA 18:2)

1. Institute organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

L 63638-65 EPF(c)/EWP(j)/EWA(c)/EWT(m)/EWG(m)/T Pc-4/Pr-4 RPL RM/DS/WW/JWD

ACCESSION NR: AP5017962 UR/0062/65/000/006/1066/1068
547.23

AUTHOR: Novikov, S. S.; Nikonova, L. A.; Slovetskiy, V. I.; Ivanova, I. S.

TITLE: Kinetics of addition of trinitromethane to derivatives of acrylic acid in water

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 6, 1965, 1066-1068

TOPIC TAGS: trinitromethane, methyl acrylate, ethyl acrylate, acrylamide, acrylonitrile, methacrylic acid, itaconic acid, olefin addition

ABSTRACT: The kinetics of addition of trinitromethane (TNM) to a series of α,β-unsaturated compounds (methyl and ethyl ester, amide, and nitrile of acrylic acid; methacrylic and itaconic acid were studied in 0.2-0.5 M HCl at 40C. Determination of the rate constants of these reactions made it possible to estimate the activation of the C=C bond by various electron-acceptor groups, and to determine the influence on the reaction rate of substituents at the α-carbon atom of the unsaturated compound. In the case of addition of TNM to methacrylic acid, itaconic acid, acrylonitrile, and methyl acrylate, the rate constants were second-order and independent of the hydrogen ion concentration in the acid medium. On

Card 1/2

L 63638-65

ACCESSION NR: AP5017962

1

the other hand, in the case of acrylamide, the rate constant decreased with decreasing hydrogen ion concentration; this is attributed to the greater tendency of the $CONH_2$ group to be protonated as compared to the other electron-acceptor groups. It is concluded that the activation of the C=C bond increases in the order $CH_2=CHCN < CH_2=CHCOOC_2H_5 < CH_2=CHCOOCH_3 < CH_2=CHCOOH$. The decrease in reactivity from acrylic to itaconic and methacrylic acid is probably due to the stabilization of the C=C bond caused by its hyperconjugation with the methylene and methyl group. Orig. art. has: 1 figure and 3 tables.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 03Jan64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 002 OTHER: 002

Card 2/2

L 62702-65 EPF(c)/EWP(j)/EWA(c)/EWT(m) Pc-4/Pr-4/Ps-4 RPL RM/WW/JW
ACCESSION NR: AP5019780 UR/0062/65/000/007/1283/1285
531.1

34
32
3

AUTHOR: Novikov, S. S.; Nikonova, L. A.; Slovetskiy, V. I.

TITLE: Kinetics of addition of gem-dinitroethane to methyl acrylate and acrylonitrile

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 7, 1965, 1283-1285

TOPIC TAGS: ionic addition reaction, nitrocompound, reaction kinetics, nitrocarboxylic acid, bimolecular reaction

ABSTRACT: The kinetics of addition of gem-dinitroethane to methyl acrylate and to acrylonitrile were studied in aqueous buffer solutions of various acidities. The reaction kinetics were followed by observing spectrophotometrically the absorption of the dinitroethane anion (λ_{max} 380 mμ, log ε 4.23). Pseudomonomolecular kinetics were created by using a large excess of the unsaturated component. Changes in hydrogen ion concentration did not affect the second order rate constants. This indicates that the rate-determining step is the attack of the dinitroethane anion on the β-carbon of the unsaturated compound:

Card 1/2

L 62702-65

2

ACCESSION NR: AP5019780

$$[CH_3C(NO_2)_2]^- + CH_2 = CHR \xrightarrow{slow} CH_3C(NO_2)_2CH_2\bar{C}HR$$

$$CH_3C(NO_2)_2CH_2\bar{C}HR + H^+ \xrightarrow{fast} CH_3C(NO_2)_2CH_2CH_2R.$$

The activation energies, calculated from plotted rate data, are 14.9 kcal for methyl acrylate and 17.5 kcal for acrylonitrile. Orig. art. has: 1 figure and 3 tables. [VS]

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelenskogo Akademii nauk SSSR (Institute of Organic Chemistry, Academy of Sciences, SSSR) 55

SUBMITTED: 29Oct64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 002 OTHER: 004 ATD PRESS: 4064

Card 2/2

L 1665-66 EWT(n)/EPF(c)/EWP(j)/T/EWA(c) RPL WW/JW/WE/RM

ACCESSION NR: AP5022937 UR/0062/65/000/008/1491/1494
543.422+547.232

AUTHOR: Ivanov, A. I.; Chlenov, I. Ye.; Tartakovskiy, V. A.; Slovetskiy, V. I.; Novikov, S. S.

TITLE: Molecular absorption spectra of O-ethyl esters of dinitromethane and trinitromethane

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 8, 1965, 1491-1494

TOPIC TAGS: IR spectrum, UV spectrum

ABSTRACT: The IR and UV spectra of several O-ethyl esters of geminal di- and trinitroderivatives of methane were taken in order to examine the monochromaticity of their aci-forms and anions. The IR spectra were taken with the UR-10 spectrophotometer and the UV spectra were taken in a methyl chloride solution at 5°C with SF-4 spectrophotometer. The IR spectra of the title compounds confirmed their structure by showing absorption bands corresponding to

$C = N$ bond, $N = C - NO_2$, $N = C(NO_2)_2$ and

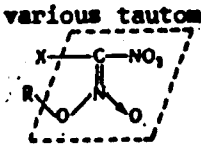
Card 1/2

L 1665-66

ACCESSION NR: AP5022937

3

The UV spectra indicate that in various tautomeric forms there is a constant structural fragment



with a maximum absorption in the region of 310-320 mμ (characteristic for aci-form) and a molar extinction coefficient of about 8000. The location of the maximum and absorption intensity are practically independent from X and R. This study revealed that the aci-forms and anions of gem-di-and trinitrocompounds are not monochromatic. (According to the literature data maximum absorption of anion derived from gem-di-and trinitroderivatives of methane occurs in 345-380 m region). Orig. art. has: 2 tables, 3 formulas.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo akademii nauk SSSR (Institute of Organic Chemistry Academy of Sciences SSSR)

SUBMITTED: 02Dec64 ENCL: 00 SUB CODE: NP, OP

NO REF SOV: 005 OTHER: 003

Card 2/2 OP

L 14708-66 EWT(l)/EWT(m)/EWA(d)/EWP(j)/EWP(k) IJP(c) WW/JW/RM

ACC NR: AP6002102 SOURCE CODE: UR/0062/65/000/011/2063/2065

AUTHORS: Slovetskiy, V. I.; Okhlobystina, L. V.; Faynzil'berg, A. A.; Ivanov, A. I.; Biryukova, L. I.; Novikov, S. S.

ORG: Institute of Organic Chemistry im. N. D. Zelinski, Academy of Sciences SSSR (Institut organicheskoy khimii Akademii nauk SSSR)

TITLE: Spectrophotometric determination of the ionization constant of fluorodinitromethane

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 11, 1965, 2063-2065

TOPIC TAGS: ionization, fluorine compound, nitromethane / SF-4 spectrophotometer

ABSTRACT: Ionization constant of fluorodinitromethane (I) in water and absolute ethanol was determined spectrophotometrically according to the method described by V. I. Slovetskiy, S. A. Shevelev, A. A. Faynzil'berg, and S. S. Novikov (Zh. Vses. khim. ob-va im. D. I. Mendeleyeva, 6, 599, 707, 1961). The measurements were taken on a SF-4 spectrophotometer fitted with a thermostatic attachment. Concentration of I was kept within 2.2×10^{-5} to 5×10^{-5} mole/ℓ. The measurements were taken in the region 365-395 mμ. Spectra of the species present in solution are shown in Fig. 1. Acidity of I was found to be 10^{-4} less than that of the parent dinitromethane. Entropy, enthalpy, and free energy were calculated.

Card 1/2 UDC: 543.422+541.132+547.232

ACC NR: AP6002102

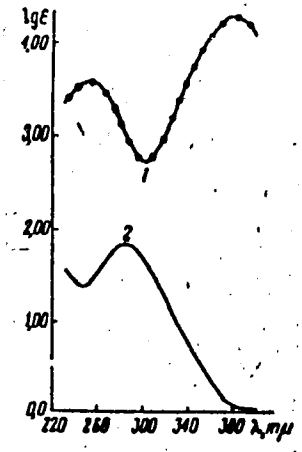


Fig. 1. UV spectra of fluorodinitromethane in aqueous solution: 1 - anion; 2 - nondissociated molecule.

Orig. art. has: 2 tables and 2 figures.

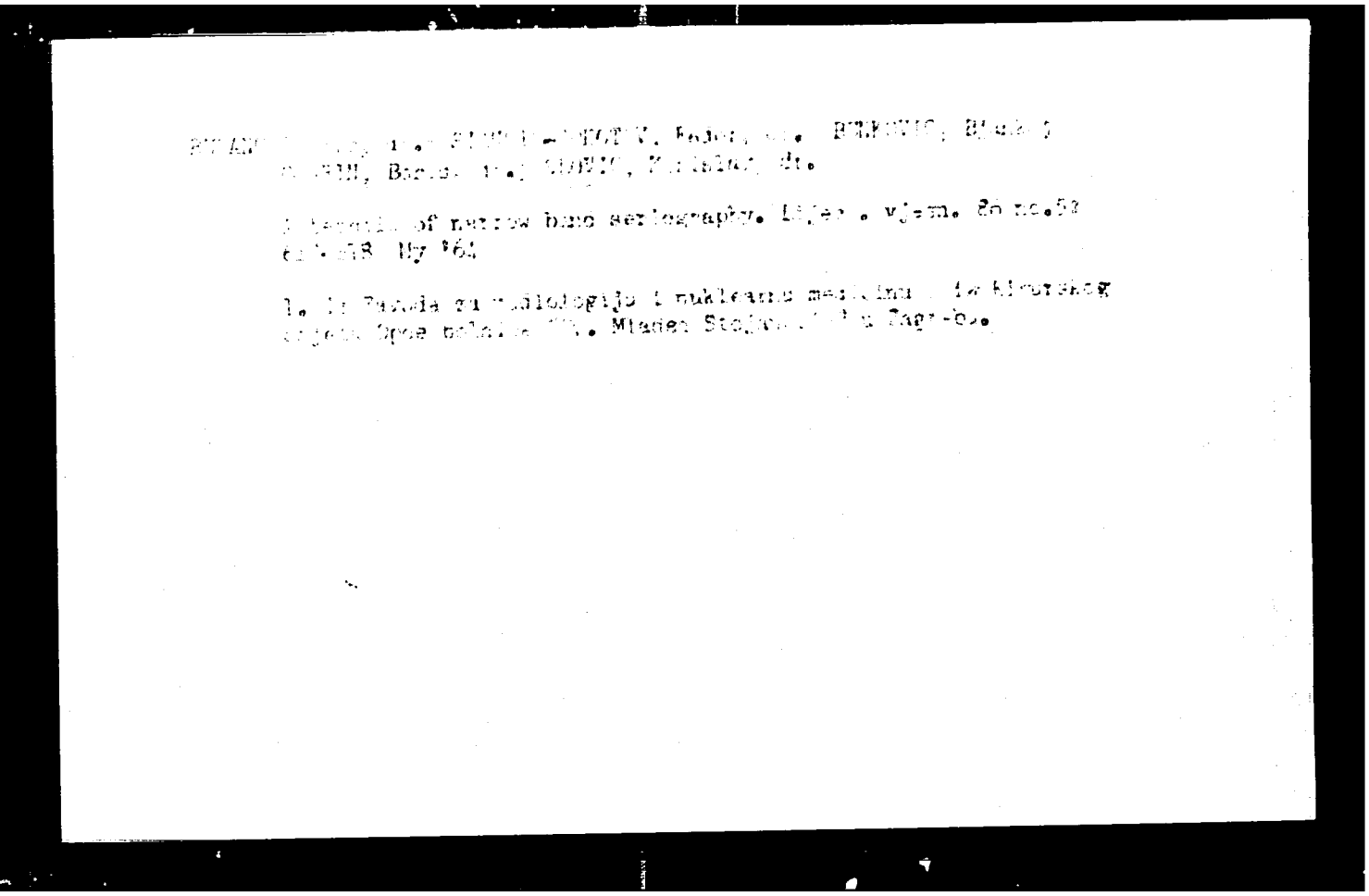
SUB CODE: 07/ SUBM DATE: 24Mar65/ ORIG REF: 004

BV/
Card 2/2

SLOVIC, D.; DIMITROVSKI, T. ; MATOV, K.

Measures for the improvement of fruit culture in Macedonia. p.3.
(Socijalisticko zemjodelstvo, Vol. 9, No. 2, Feb. 1957, Skpoje, Yugoslavia)

SO: Monthly List of East European Accessions (EEAL) Lc. Vol. 6, No. 8, Aug 1957. Uncl.



NETTL, S.; LICHY, J.; SLOVICEK, J.

Differential diagnosis of supratentorial gliomas and meningiomas in the clinical and angiographic picture. Cesk.neur. 23 no.3:167-176 Mr '60.

1. Neurologicka klinika KU, Hradec Kralove, prednosta prof.dr. Sc MUDr. Mir. Sercl.

(BRAIN NEOPLASMS diag.)
(GLIOMA diag.)
(MENINGIOMA diag.)

SLOVIK, T. Ye.

Analysis of functional conditions of the spinal centers in compression of the spinal cord before and after surgery. Vopr. neirokhir. 17 no.5:40-48, Sept-Oct 1953. (CIML 25:5)

1. Of the Institute of Neurosurgery imeni Academician N.N. Burdenko of the Academy of Medical Sciences USSR.

SLOVIK, T. Ya.

"The Dynamics of the Restoration of Functions After Operations for the Removal of Tumors From the Spinal Cord." Cand Med Sci, Acad Med Sci, USSR, 10 Nov 54. (VM, 26 Oct 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (10)

SO: Sum. No. 481, 5 May 55

[illegible]

Characteristics of pathophysiological shifts during an experimental operation for the removal of an intracerebral hematoma using certain types of anesthesia. Trudy Inst. im. N.V. Sklif. 8:35-42 '63. (MIRA 18:6)

1. Moskovskiy oblastnoy nauchno-issledovatel'skiy klinicheskiy institut i Novosibirskiy nauchno-issledovatel'skiy institut travmatologii i ortopedii.

L 56463-65
ACCESSION NR: AP5018602 UR/0219/64/0058/012/0027/0031

AUTHOR: Levin, Yu. M.; Slovikov, B. I. 14 B

TITLE: Oxygen supply and hemodynamics of the brain during fatal blood loss and subsequent resuscitation

SOURCE: Byulleten' eksperimental'noy biologii i meditsiny, v. 58, no. 12, 1964, 27-31

TOPIC TAGS: oxygen, blood circulation, brain, encephalology, cardiovascular system

ABSTRACT: The content of free oxygen and the rate of blood flow in cerebral vessels were studied in cats subjected to fatal blood loss and subsequently resuscitated. Acute blood loss led to a slowing of the blood flow and a drop in the oxygen supply in the brain, but the two were not correlated. Body blood pressure fell sharply: to 20-30% of its initial level after 1-2 minutes, and to zero after 6-8 minutes. The rate of cerebral blood flow stayed at the 90-80% level for 60-80 seconds and then fell rapidly. In the 3rd minute it was 50% and in the 4th minute about 35% of its initial level. The oxygen supply in the first 2 minutes dropped more slowly than the blood pressure but faster than the cerebral blood flow
Card 1/2

L 56463-65

ACCESSION NR: AP5018602

rate. The latter fact is apparently explained by increased oxygen consumption in the first 1½-2 minutes. After resuscitation, no oxygen was supplied to some cerebral areas for as much as 5-60 minutes or even longer, even when blood pressure, cardiac output, and general cerebral blood flow had been fully restored. A possible cause of this is occlusion of small blood vessels and hampered penetration of oxygen into areas remote from functioning capillaries. This phenomenon could explain focal necroses in verse tissue, and in some cases it may be the cause of irreversibility. Microcirculation and oxygen consumption in the liver (and other organs) did not parallel the shifts noted in the brain during the experiments.

Orig. art. has: 3 graphs.

ASSOCIATION: Novosibirskiy nauchno-issledovatel'skiy institut travmatologii i ortopedii (Novosibirsk Scientific Research Institute of Traumatology and Orthopedics); Kemerovskiy meditsinskiy institut (Kemerov Medical Institute)

SUBMITTED: 03Mar64 ENCL: 00 SUB CODE: LS

NR REF SOV: 007 OTHER: 003 JPRS

bpb

Card 2/2

SLOVIKOVSKI, G.

Some special characteristics of transformer insulation.
Elektrichestvo no.6:83-87 Je '61. (MIRA 14:10)

1. Institut elektrotekhniki Pol'skoy Narodnoy Respubliki, Varshava.
(Electric transformers)
(Electric insulators and insulation)

TSETLIN, V.M.; DENISOV, V.F.; TSEDILIN, S.A.; Prinimali uchastiye: SASIN, V.I., mladshiy nauchnyy sotrudnik; GUDIN, B.S., master; DRACHEVA, T.V., laborantka; OL'KOV, V.T., laborant; SLOVIKOVSKIY, A.A., laborant

Investigating the effect of various factors on the process of nonferrous metal dust coagulation in a sound field. Sbor. nauch. trud. Gintsvetmeta no.19:595-607 '62. (MIRA 16:7)

(Nonferrous metals—Metallurgy) (Aerosols)
(Sound waves—Industrial applications)

ACCESSION NR: AR4014766 S/0058/63/000/012/E044/E044

SOURCE: RZh. Fizika, Abs. 12E379

AUTHORS: Danilov, V. N.; Slovikovskiy, G. F.

TITLE: Display of dislocation in crystals of dielectrics

CITED SOURCE: Izv. Kiyevsk. politekhn. in-ta, no. 40, 1962, 126-131

TOPIC TAGS: dielectric, dielectric crystals, dislocation, chemical etching, thermal etching, etching, etch pits, Cottrell atmosphere, excess vacancies

TRANSLATION: Dislocations in single crystals of KCl, NaCl, and LiF were displayed by chemical and thermal etching. It was observed that in incandescent crystals the regular form of the etch pits becomes violated; this phenomenon is attributed to the formation around the dislocations of Cottrell atmospheres made up of excess

Card 1/2

ACCESSION NR: AR4014766

vacancies. It is found that the dislocation density increases sharply following electrical breakdown of the dielectric. Yu. Fishman.

DATE ACQ: 24Jan64 SUB CODE: PH ENCL: 00

Card 2/2

L 14431-66 EWT(m)/T/EWP(t)/EWP(z)/EWP(b) IJP(c) JD/HW
ACC NR: AP6002647 (N) SOURCE CODE: UR/0021/65/000/011/1465/1467

AUTHOR: Danylov, V. N. -- Danilov, V. N.; Slovikovs'kyy, H. F. -- Slovikovskiy, G. F.; Shklyaruk, L. I.

ORG: Kiev Institute of Technology (Kyyivs'kyy tekhnologichnyy instytut); Kiev Polytechnic Institute (Kyyivs'kyy politekhnichnyy instytut)

TITLE: A study of metal regression after hardening

SOURCE: AN UkrRSR. Dopovidi, no. 11, 1965, 1465-1467

TOPIC TAGS: hardness, electric conductivity, annealing, silver, nickel

ABSTRACT: The authors investigated metal regression after hardening on technically pure nickel and 99.99% pure silver. Electrical resistivity and microhardness measurements are used to show that in the case of technically pure metals the regression curve after annealing hardening has at room temperature a maximum which is absent in pure and deformed metals. This microhardness maximum can be explained by interactions of frozen vacancies with dislocations. The maximum on the electrical conductivity regression curve can be explained

Card 1/2

L 14431-66

ACC NR: AP6002647

by mutual interactions among vacancies and their interactions with impurities and dislocations. The paper was presented by Academician B. E. Paton, Member of AN UkrSSR. Orig. art. has: 5 figures.

SUB CODE: 11 / SUBM DATE: 28May64 / ORIG REF: 003 / OTH REF: 007

Card 2/2

ACCESSION NR: AP4037057 S/0073/64/030/005/0504/0507

AUTHORS: Slovikovskiy, V.I.; Demchenko, P.A.

TITLE: Monoethanolamide of naphthenic acids

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 30, no. 5, 1964, 504-507

TOPIC TAGS: naphthenic acid monoethanolamide, naphthenic acid, fatty acid, surfactant, crude naphthenic acid

ABSTRACT: This is an effort to find a substitute for fatty acids. It is known that soaps of naphthenic acids are just as unstable in hard water and in acid medium as soaps of fatty acids. Therefore, it appeared expedient to block the carboxyl group of the naphthenic acids which would then produce a surfactant, and this is achieved best by the transformation of these acids in alkylolamides. Until now the latter were prepared from natural fats; here naphthenenic acids were used in such a synthesis for the first time. Crude naphthenic acid with 15% nonsaponifying resins was diluted with low-boiling hydrocarbons (1:1.5 by volume), treated with sulfuric acid (73-75% concentration taken 8-10% of the waterfree crude), heated

Card 1/2

ACCESSION NR: AP4037057

to 45C for coagulation of the resins. The remaining 8-10% hydrocarbons which cannot be saponified are eliminated by desolubilization from the colloidal soap solution (acetone, dioxane, methanol, ethanol, etc.). The soap is then broken down with sulfuric or hydrochloric acid and pure naphthenic acids are prepared. These naphthenic acids were used for preparing their methyl esters and the latter were amidated with monoethanolamine + catalyst into monoethanolamide. Monoethanolamides are oily dark liquids readily soluble in polar organic solvents. They form stable emulsions in water and can find broad applications in industry. Their physical properties are described. Orig. art. has: 1 formula and 3 tables.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN UkrSSR (Institute of General and Inorganic Chemistry, AN UkrSSR)

SUBMITTED: 16May63 ENCL: 00

SUB CODE: OC NR REF SOV: 003 OTHER: 000

Card 2/2

[illegible], V.I.

AUTHOR: Slovikovskiy, V.I. (Slovikovs'kyy, V.I.) 21-5-24/26

TITLE: Effect of Cultivated Sands on Carbon Dioxide Content in the Soil Air (Vliyaniye okul'turivaniya peskov na soderzhaniye ugol'noy kisloty v pochvennom vozdukhe)

PERIODICAL: Dopovidi Akademii Nauk Ukrains'koi RSR, 1957, Nr 5, pp. 518-520 (USSR)

ABSTRACT: The author describes the results of a study of the carbon dioxide content in the air of cultivated and uncultivated sands. It turned out that the amount of this content depends upon the composition and physico-chemical properties of the sandy soils. The studies carried out during 1954 to 1955 with the sands of the Poles'ye region and the Lower Dnepr area showed that the bringing peat into the sandy soil increases the content of carbon dioxide by several times. The amount of increase depends also on the method of bringing in. If the peat is brought in as a layer to a depth of 25 cm, the content of carbon dioxide increases by 2 to 4 times during the vegetative period. If the peat is mixed with the sand, the carbon dioxide content increases by 2 to 2.5 times.

Card 1/2 The article contains 3 tables and 4 Slavic references.

Slovikovskiy, V. I.

AUTHOR: Slovikovskiy, V. I., 20-3-44/52

TITLE: **The Growth of Pine Saplings as Influenced by Sand Cultivation**
(Vliyaniye okul'turirovaniya peskov na rost sazhentsev sosny)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 3, pp. 515-518 (USSR)

ABSTRACT: Many scientists hold the opinion, that the plants absorb the carbon dioxide only by their leaves. But A.L.Kursanov and his team demonstrated (References 2 and 3), that the assimilation takes place also by way of the roots. The use of turf made it possible to improve the vital conditions of the young pine trees. The author writes, that the experiments of 1954 have shown, that by adding turf ot the sand the content of the carbon dioxide in the air in the soil pores increased more than the 2 to 3 fold. Owing to the good diffusion a remarcable strong increase of the content of carbon dioxide can be observed in the air in the soil pores during the first year. The soil looses carbon dioxide by raise of temperature and by lack of water, and in open places also by the wind. In order to bind the carbon dioxide, at least temporarily, to the sand, the author considers it to be necessary to add to the soil alkaline earth metals, in particular the calcium in form of pulverized carbonate $CaCO_3$. The binding of the carbon dioxide to the soil can be effected also by ammonia combined with the si-

Card 1/3

The Growth of Pine Saplings as Influenced by Sand Cultivation

sand with an addition of turf and calcium-carbonate. An addition of calcium carbonate without turf has the same effect as the pure turf. The loosening of the soil proved to be essential for the growth of the organic substance. According to the resulting values it is recommendable to undertake a regular preparation of the sand. There are 1 figure, 4 tables and 6 Slavic references.

ASSOCIATION: Section of Chemical and Geological Sciences of the AN USSR (Otdeleniye khimicheskikh i geologicheskikh nauk Akademii nauk SSSR)

PRESENTED: June 17, 1957, by A.L.Kursanov, Academician

SUBMITTED: June 13, 1957

AVAILABLE: Library of Congress

ABS. JOUR.: Ref Zhur-Biologiya, No. 5, 1959, No.20114

ABSTRACT: washed out 50-60% of the soluble substances from them. The decomposition of beech and Eastern red oak leaves and pine needles took place more slowly. In 10½ months there was 7.3% washed out from the leaves of beech, 20.5% from those of the Eastern red oak, the English oak and from pine needles 36.5%. During the fall-winter-spring period there also takes place, notwithstanding more slowly, the washing out of organic substances and

CARD: 2/5

ABS. JOUR: Ref Zhur-Biologiya, No. 5, 1959, No.20114

ABSTRACT: ash elements. From November to March with 113 millimeters of precipitation there were from 5 to 11% of the soluble substances leached out from the leaves of European elder, wahoo, mountain ash, horsebeam, silver maple, Siberian peashrub and English elm, and from 0.8 to 1.0% from the leaves of the Scotch pine, Eastern red oak, beech, checkertree mountainash [illegible] and English oak. The rate of leaching of the dry dry substances dif[illegible]

CARD: 3/5

SLOVIKOVSKIY, V. I., Cand of Agric Sci — (diss) "Special Features of the Utilization of Fallen Leaves for Improvement of the Soil," Kiev ,1959, 13 pp (Ukrainian Academy of Agricultural Sciences) (KL, 4-60, 122)

SOV/21-59-2-14/26

AUTHOR: Slovikovskiy, V.I. (Slovikovs'kyy, V.I.)

TITLE: The Diffusion of CO_2 in Sandy Soil (Rasprostraneniye uglekislogo gasa v peschanoy pochve)

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1959, Nr 2, pp 169-171 (USSR)

ABSTRACT: The author studied the diffusion of CO_2 in dry and in wet sand, by means of laboratory and field tests in the Kiyev oblast'. The study established that the content of CO_2 in the air over sandy ground is very low, that CO_2 diffuses better in dry sand than in wet sand, that the diffusion of CO_2 downwards into the ground and sidewards was more intensive than upwards. Table 1 presents data on the diffusion of CO_2 in dry sand. Table 2 shows influence of wetness on the diffusion of carbonic gas in sand.

Card 1/2

The Diffusion of Carbonic Gas in Sandy Soil SOV/21-59-2-14/26

There are 2 tables, 1 sketch and 5 Soviet references.

AUTHOR: By P.A. Vlasyuk, Member of the AS UkrSSR, and the All-Union Lenin Academy of Agricultural Sciences

SUBMITTED: October 20, 1958

Card 2/2

SLOVIKOVSKIY, V.I.; DEMCHENKO, I.A.

Monoethanolamides of naphthenic acids. Ukr.khim.zhur. 30 no.5:504-507 '64. (MIRA 18:4)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

SLOVINSKAYA, V. M.

SLOVINSKAYA, V. M.: "Equilibrium diagrams of a mutual four-way system of the iodides and chlorides of potassium and sodium in aqueous solutions at 0, 25, and 50 degrees Centigrade." Acad Sci Uzbek SSR. Inst of Chemistry. Tashkent, 1956. (Dissertation for the Degree of Candidate in Chemical Sciences)

Knizhnaya letopis' No. 39, 1956. Moscow.

SLOVINSKAYA V.M.; MUKIMOV, S.M. [deceased]

Solubility isotherms for a quaternary reciprocal system KCl + NaI ⇄ NaCl + KI and H_2O at 0, 25, and 50 C. Dokl.AN Uz.SSR no.11:35-40 '56. (MIRA 13:6)

1. Institut khimii AN UzSSR. Predstavleno akad. AN UzSSR. A.S. Sadykovym.
(Solubility (Chemistry)) (Systems)

SLOVINSKAYA, V.M.

Solubility of potassium iodide and potassium chloride in the K^+, Na^+// Cl^-, J^- - H_2O system. Uzb.khim.zhur. no.5:19-24 '58. (MIRA 12:2)

1. Sredneaziatskiy politekhnicheskiy institut.
(Potassium halides) (Solubility)

[illegible]

[illegible], Ya. M., [illegible], G. G., [illegible]

"Study of γ-Quantum Generated in $\pi^- - Xe$ Reaction with π^- Mesons Momentum of 9 Gev/c"

report presented at the Intl..Conference on High Energy Physics, Geneva, 4-11 July 1962

Joint Inst. for Nuclear Research
Laboratory of High Energies, Duban, 1962

L 2120-65 EWT(m) DIAAP/AFWL/SSD/ESD(t)
ACCESSION NR: AP4046389 S/0056/64/047/003/0801/0805

AUTHORS: Gramenitskiy, I. M.; Okhrimenko, L. S.; Slovinskiy, B.; Strugal'skiy, Z. S.

TITLE: Estimate of the cross section for the charge exchange of negative pions on quasi-free protons at 9 GeV/c

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 3, 1964, 801-805

TOPIC TAGS: charge exchange, pion proton scattering, exchange cross section, elastic scattering, bubble chamber

ABSTRACT: In view of the scarcity of data on the exchange scattering of negative pions by protons in the energy region of several GeV, the authors investigated the exchange scattering of 9 GeV/c negative pions by quasi-free protons in a xenon bubble chamber, with an aim at investigating the charge-exchange reaction

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$$\pi^- + p \rightarrow \pi^0 + n. \qquad (1)$$

This was done by scanning twice the photographs obtained in the bubble chamber, and selecting all the prongless stars within a small region of the chamber. A total of 116 such events were selected from 55,000 stereo photographs. The angles between the γ quanta and the angles between the γ-quantum direction and the direction of the primary negative pion track were measured. Much attention is paid to the separation of the background events and the events which can be mistaken for the investigated charge-exchange reaction. The final estimate for the reaction (1) is found to be 0.48 ± 0.18 mb for scattering by xenon and 0.04 ± 0.09 mb for scattering by the exchange quasi-free proton. In the case of pions of 200 MeV energy, the exchange cross section is -0.03 ± 0.03 mb. This indicates that the elastic charge exchange of pions at 9 GeV/c is vanishingly small.

"The authors thank Ye. Bogdanovich, V. G. Grishin, and M. I. Podgoretskiy for useful discussions, and also N. Smirnova and L. Mas-

L 2[illegible]
ACCESSION NR: AP4046389

2

lova and G. Stroykova for help with the work." Orig. art. has: 3 figures, 4 formulas, and 1 table.

ASSOCIATION: Ob"yedinenny*y institut yaderny*kh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: 21Mar64 ENCL: 00

SUB CODE: NP NR REF SOV: 007 OTHER: 008

Card 3/3

SLOVINSKIY, D.M.; KATSNEL'SON, M.M.

Fractional composition of oil distillates. Khim. i tekh. topl. i masel 6 no.7:7-12 Jl '61. (MIRA 14:6)

1. Giproneftezavody.
(Lubrication and lubricants)

KALATOZISHVILI, N.I.; SLOVINSKIY, K.N.

Use of a binary-decimal code in case of a digital reading in a pulse-code telemetering system. Priborostroenie no.9:18-19 S '63. (MIRA 16:9)

(Telemeter)

SLOVINSKIY, N A

Mosty malykh otverstiy s obleghennymi oporami (Small span bridges with alleviated footings, by) N. A. Slovinskiy (et al) Moskva, Dorizdat, 1951. 52 p. illus., diagrs., tables. Cataloged from abstract. Construction of bridges having small spans buttressed with alleviated footings, and the engineering calculations and experiments necessary in their construction and testing.

N/5
671.21
.S6

SLOVINSKIY, M.A.

Experimental study of reinforced concrete columns having rigid reinforcement in connection with central compression. Izv.AN Arm. SSR.Ser.FMET nauk 4 no.5:413-419 '51. (MLRA 9:8)

1. Institut stroymaterialov i sooruzheniy Akademii nauk Armyanskoy SSR.

(Columns, Concrete)
(Reinforced concrete construction)

SLOVINSKIY, N.A., inzhener.

Sectional joints for timber piles. Mats.i izobr.predl.v stroi no.58:14-15 '53. (MLRA 7:2)
(Pile driving)

SLEV [illegible], N. A.

"Small Four-Hinged Bridges on Lightened Supports." Can Tech Sci, Tbilisi Inst of Engineers of Railroad Transport imeni V. I. Lenin, Min Transportation Tbilisi, 1954. (KL, No 11, Mar 55)

So: Sum. No 710, 29 Sept 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

SLOVINSKIY, N.A., kandidat tekhnicheskikh nauk.

Designing reinforced concrete bridge pile supports. Avt.der. 18 no.7:31 N '55. (MLRA 9:4)
(Bridges, Concrete)

SLOVINSKIY, N.A., inzhener.

Calculating bent supports of girder bridges. Avt.dor.19 no.3: 22-25 Mr '56. (Girders) (MLRA 9:7)

SLOVIESKIY, N., kand.tekhn.nauk

For a rational distribution of plants producing precast reinforced concrete. Avt.dor. 22 no.7:20 Jl '59. (MIRA 12:9)
(Precast concrete--Transportation)

SLOVINSKIY, N.A., kand.tkehn.nauk; KIMBERG, A.M., kand.tekhn.nauk

Using designs made by Soviet bridge builders. Avt. dor. 23 no.5: 26 My '60. (MIRA 13:10)
(Yellow river--Bridges, Concrete)

ROSSIYSKIY, Vladimir Alekseyevich, prof.; NAZARENKO, Boris Pavlovich, kand. tekhn. nauk; SLOVINSKIY, Nikolay Aleksandrovich, kand. tekhn. nauk; GIBSHMAN, Ye.Ye., prof., doktor tekhn. nauk, retsenzent; KALMYKOV, N.Ya., doktor tekhn. nauk, prof., retsenzent[deceased]; POLIVANOV, N.I., prof., doktor tekhn. nauk, retsenzent; KIRILLOV, V.S., kand. tekhn. nauk, retsenzent; BASOV, S.Ye., inzh., retsenzent; PANKRATOV, V.M., inzh., red.; GANYUSHIN, A.I., red.izd-va; BODANOVA, A.P., tekhn. red.

[Examples of the design of precast reinforced concrete bridges] Primery proektirovaniia sbornykh zhelezobetonnykh mostov. Moskva, Avtotransizdat, 1962. 494 p. (MIRA 16:2)

1. Glavnyy spetsialist po mostam Khar'kovskogo otdeleniya Gosudarstvennogo proyektnogo instituta po promyshlennomu transportu (for Basov).

(Bridges, Concrete--Design and construction)

KOLDOBSKIY, S.V.; SLOVINSKIY, N.A.; ANTONOV, Ye.A.; ARAKHAYEV, I.S.; ZHUKHOV, B.I.

Main highway of friendship. Avt.dor. 28 no.8:14-18 Ag '65.
(MIRA 18:11)

VISHNEVSKIY, N.A., polkovnik med.sluzhby, prof. ZHORZH, G.A. podpolkovnik med. sluzhby, kand.med.nauk, SLOVINSKIY, N.K., polkovnik med.sluzhby

Importance of visual acuity and ocular refraction for shooting.
Voen.-med.zhur. no.8:44-49 Ag '58 (MIRA 12:1)
(SHOOTING, MILITARY)
(VISION)

SLOVINSKIY, V. A.

TOKACHIROV, V. A. - st. nauchn. sotr. i SLOVINSKIY, V. A. - Kand. tekhn. nauk st. nauchn. sotr.

Tbilisskiy nauchno-issledovatel'skiy institut sooruzheniy i gidroenergetiki. Issledovaniye novykh metodov sooruzheniya gidrotekhnicheskikh tunneley

Page 84

SO: Collection of Annotations of Scientific Research Work on Construction, completed in 1950.
Moscow, 1951

SLOVINSKIY, V.A.

Using through pile spur dikes and dike dams. Trudy TsIIZHT no.22: 118-132 '50. (MLRA 9:11)

(Shore protection)

SLOVINSKIY, V.A., kandidat tekhnicheskikh nauk.

Stability and strength of elastic reinforced concrete elements in the prestressing process. Bet.i zhel.-bet. no.10:353-358 O '56. (MLRA 9:11)

(Girders) (Prestressed concrete--Testing)

SOV/124-57-9-11015

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 9, p 160 (USSR)

AUTHOR: Slovinskiy, V. A.

TITLE: Stability and Strength of Flexible Reinforced-concrete Components in the Process of Pre-stressing (Ustoychivost' i prochnost' gibkikh zhelezobetonnykh elementov v protsesse ikh predvaritel'nogo napryazheniya)

PERIODICAL: Sb. tr. Tbilissk. in-ta inzh. zh.-d. transp., 1956, Nr 30, pp 54-80

ABSTRACT: RZhMekh, 1957, abstract 8403

Card 1/1

SLOVINSKIY, V.A., kand.tekhn.nauk

Prestressed span structures made of standardized blocks.
Transp.stroi. 10 no.3:22-24 Mr '60. (MIRA 13:6)
(Bridges, Concrete)

DLOVINSKIY, V.A., kand.tekhn.nauk

Designing prestressed reinforced concrete construction elements with successive tensioning of reinforcements. Bet. i zhel.-bet. no.1:23-25 Ja '61. (MIRA 14:2)

(Prestressed concrete)

SLOVINSKIY, V.A.

The design of arches erected using prestressed wedges.
Trudy GPI [Grus.] no.5:111-115 '61. (MIRA 15:12)
(Arches)
(Prestressed concrete construction)

SLOVINSKIY, V.A., kand.tekhn.nauk

Precast spans made of unified elements. Transp. stroi. 11 no.5:12-15 My '61. (MIRA 14:6)
(Bridges, Concrete)

SLOVINSKIY, V.A., kand. tekhn. nauk

Construction of spans made of standardized elements. Bet. i zhel.-bet. no.11:510-512 N '61. (MIRA 16:8)

(Bridge construction)

SLOVINSKIY, V.A.

Design of some combination systems by limiting equilibrium. Soob. AN Gruz. SSR 32 no.2:389-396 '63. (MIRA 18:1)

1. Gruzinskiy politekhnicheskiy institut imeni Lenina. Submitted October 24, 1962.

SLOVINSKIY, Yu.V., inzh.

Diaphragmless precast prestressed spans. Transp. stroi. 15 no.3:17-20 Mr '65. (MIRA 18:11)

SLOVINSKIY, Yu.V., inzh.

Construction and testing overpass spans made of precast prestressed beams without diaphragms. Bet.i zhel.-bet. 9 no.12:554-555 D '63. (MIRA 17:2)

ACC NR: AP6034007 SOURCE CODE: UR/0213/66/006/005/0823/0829

AUTHOR: Vasil'chikov, N. V.; Pavlidis, Yu. A.; Slovinskiy-Sidak, N. P.;

ORG: Institute of Oceanology, AN SSSR (Institut okeanologii AN SSSR); Moscow State University im. M. V. Lomonosova (Moskovskiy gosudarstvennyy universitet); Central Scientific Research Institute of Ferrous Metallurgy im. I. P. Bardin (Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii)

TITLE: Vanadium titanomagnetite placers on coastal beaches in the Far East

SOURCE: Okeanologiya, v. 6, no. 5, 1966, 823-829

TOPIC TAGS: geologic surveying, geomorphology, ocean floor topography, vanadium, placer, beach, MINERALOGY

ABSTRACT: The existing titanomagnetite placers of coastal beach moraine genesis found in the Far Eastern USSR from large deposits of vanadium ore. Placers of this type have a number of accumulative formations (with different titanomagnetite contents) stretching in bands approximately parallel to the shoreline. Reserves of this useful mineral in some of the placers have been tentatively estimated at millions of tons. However, the regenerative ability of modern placers should be taken into consideration. Owing to the looseness of the ore body and the surface bedding of the deposits mining from such placers is comparatively cheap and simple. Orig. art. has: 3 figures and 2 tables.

SUB CODE: 08/ SUBM DATE: 02Mar66/ ORIG REF: 007/ OTH REF: 003/

UDC: 551.351(571.6)

Card 1/1

SLOVODAN, A. T.

3[illegible] Slovodyan, A. T. Osnovnyye voprosy proektirovaniya nizkonapornykh zemlyanykh plotin. Trudy Ukr. in-ta gidrologii i gidrotekhniki (Akad. Nauk Ukr. SSR), T. V, 1948, s. 2[illegible] Ukr. yaz. ----- Rezyume na rus. yaz. -----Bibliogr: 7 nazv

SO: Letopis'Zhurnal'nykh Statey, Vol. 5[illegible], Moskva, 1949

Slovodyanyuk, L.I

2667. TURBINE STAGE WITH CONSTANT REACTION. Lovina, M.E., and Slovodyanyuk, L.I. (Teploenergetika [Heat Pwr Engng, Moscow], Sept. 1956, vol. 3, 28-35). By way of solution to the problem of creating a turbine stage having constant pressure along the radius, it is shown that such a stage, using conventional cylindrical blades, is subject to suitable design of the turbine section between inlet and outlet valve through which the steam passes. Test data are quoted in confirmation of the theoretical assumptions. (L).

2

L 06357-67 EWT(1)/EWP(e) IJP(c)

ACC NR: AP6024531 SOURCE CODE: UR/0041/66/018/004/0060/0071

AUTHOR: Skorokhod, A. V. (Kiev); Slovodenyuk, N. P. (Kiev)

ORG: none

TITLE: On the asymptotic behavior of several functionals of the Brownian movement process

SOURCE: Ukrainskiy matematicheskiy zhurnal, v. 18, no. 4, 1966, 60-71

TOPIC TAGS: Brownian motion, ~~mechanics~~, random process, asymptotic stability, ASYMPTOTIC PROPERTY

ABSTRACT: If $w(t)$, $0 < t < +\infty$, is an m-dimensional Brownian process, i. e., $w(t) = (w^{(1)}(t),\ldots,w^{(m)}(t))$, where $w^{(i)}(t)$ are independent one-dimensional Brownian movements, and $f(x)$ is a Borel function integrable in each measurable set $R^{(m)}$, the following quantity is studied

$$\eta_T = \int_0^T f(w(t))\,dt = \int_0^T f(w^{(1)}(t),\ldots,w^{(m)}(t))\,dt.$$

to determine its limiting distributions when $T \to \infty$. In particular, constants B_T are sought such that the distribution of the quantity η_T/B_T converges when $T \to \infty$ to a

Card 1/2

L 05387-67

ACC NR: AP6024531

certain non-singular distribution. The one-dimensional process is first considered and sufficient conditions are established for the existence of a limiting distribution of the quantities η_T for sufficiently general assumptions regarding the form of $f(x)$.

Some of the results thus obtained are then extended to a multi-dimensional Brownian process. Orig. art. has: 54 formulas.

SUB CODE: 12,20/ SUBM DATE: 20Jan66/ ORIG REF: 005/ OTH REF: 003

Card 2/2

SHARPENAK, A.E.; MIKHEYEVA, L.I.; NIKOLAYEVA, N.V.; SLOVOKHOTNOVA, I.A.; BOBIK, G.S.; ALAYEVA, V.N.; STUPNIKOVA, G.A.; GUSAKOVA, I.A.; GUSARSKAYA, V.V.; VOLCHEK, K.Ye.; SMIRNOVA, V.N.; PANOVA, V.V.; KHERSONSKAYA, F.M.;

Connection between enamel, the dentine, and the organism as a whole. Vrach.delo no.2:203-205 F '59. (MIRA 12:6)

1. Kafedra biokhimii (zav. - prof.A.E.Sharpenak) Moskovskogo meditsinskogo stomatologicheskogo instituta.
(TEETH)

ALEKSANDROV, Yu.A., BELOVA, N.V., BLOKHINTSEV, L.I., SOKOL, G.A.
SHTARKOV, L.N.

"Photodisintegration of Deuteron at 50-150 Mev."

Lebedev Physics Inst. Acad. Sci. USSR.

paper submitted at the A-U Conf. on Nuclear Reactions in Medium and Low Energy Physics, Moscow, 19-27 Nov 57.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R001651410008-5"

Slovokhotov L. I

AUTHORS: Aleksandrov, Yu.A., Delone, N.B., Slovokhotov, L.I. 56-3-11/59
Sokol, G.A., Shtarkov, L.N.

TITLE: The Photodisintegration of the Deuteron at Energies from 5o to 15o MeV (Fotorasshchepleniye deytona pri energiyakh ot 5o do 15o MeV)

PERIODICAL: In the 265 MeV synchrotron of the F.I.A.N. the photodisintegration was measured in D_2O and H_2O preparations by recording the protons in a telescope consisting of 2 proportional recording tubes. For the γ-energies of 54, 7o, 88, 11o, 129, 148 MeV the differential effective cross sections were measured at the following angles: 22,5; 45;, 67?5; 9o; 112,5; 135; 157,5° and diagrammatically recorded. There are 3 figures and 2 tables.

ASSOCIATION: Physics Institute im. P.N.Lebedev, USSR Academy of Sciences (Fizicheskiy institut imeni P.N.Lebedeva Akademii nauk SSSR)

SUBMITTED: March 27, 1957.

AVAILABLE: Library of Congress

Card 1/1

ALEKSANDROV, Yu.A.; DZELOVE, N.B.; SLOVOKHOTOV, L.I.; SOKOL, G.A.; SHTARKOV, L.N.

Photodisintegration of deuterons at energies from 50 to 150 Mev. Zhur. eksp. i teor. fiz. 33 no.3:614-620 S '57. (MLRA 10:11)

1. Fizicheskiy institut im. P.N. Lebedeva AN SSSR.
(Deuterons) (Nuclear reactions)

27697
S/120/61/000/003/007/041
E032/E314

21.6000

AUTHORS: Baranov, P.S., Slovokhotov, L.I., Sokol, G.A. and Shtarkov, L.N.

TITLE: A Differential Method for Determining the Efficiency of a γ-counter

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No. 3, pp. 63 - 66

TEXT: The present authors describe a method which can be used to determine the efficiency of a γ-counter in the energy range up to some hundreds of MeV. The method is based on the recording of coincidences between the proton and the γ-ray which appear during the photo-production of neutral mesons on hydrogen. A block diagram of the apparatus is shown in Fig. 2. The γ-ray beam has a maximum energy of 265 MeV and was obtained from the synchrotron of the Physics Institute of the AS USSR. It was collimated by two lead collimators before reaching the liquid-hydrogen target. The latter consisted of a thin-walled container (brass wall 15 mg/cm^2 thick) having a volume of

Card 1/8

A Differential Method ....

100 cm^3. Protons from the reaction:

$$\gamma + p = p + \pi^0 \quad (1)$$

$$\pi^0 = 2\gamma \quad (2)$$

passed through aluminium windows (250 μ) and were recorded by a telescope consisting of three proportional counters connected in coincidence (resolution equals 2×10^{-6} sec) and a single scintillation counter connected in coincidence with a γ-ray counter (resolving time of the fast coincidence circuit: 5×10^{-9} sec). The proton telescope records protons with energies $E_p \pm \Delta E_p$, where ΔE_p is determined by an absorber placed in front of the telescope and the discriminator of the third counter. The protons are separated from the charged mesons in the first and second counters of the telescope, using the difference in the specific energy losses of these particles.

Card 2/8

A Differential Method ....

The γ-counter consists of two scintillators (3.5 g/litre solution of para-terphenyl in phenyl-cyclohexane). The scintillators are 15 cm in diameter and 3 cm thick and are mounted on ФЭУ-33 (FEU-33) photomultipliers. In order to increase the efficiency of the γ-counter, lead converters, 0.8 cm thick, were placed in front of the counters. The γ scintillation counter in the proton telescope consisted of a plastic scintillator (terphenyl in polystyrene), 0.5 cm thick and 6 cm in diameter. It was mounted on a perspex light pipe and an FEU-33 photomultiplier. Recording of the coincidences between the scintillation channels was achieved with the "fast" coincidence circuit described by A.A. Rudenko (Ref. 1 - PTE, 1958, No. 6, 60). The resolution and efficiency of this coincidence circuit was checked in special experiments. The efficiency of recording of the coincidences turned out to be 95% In these experiments there was an appreciable proton background due to the target walls and the Compton scattering of the γ-rays

Card 3/8

$$\gamma + p = \gamma' + p' \qquad (5) .$$

The proton background was determined with an empty target and was found to be 10%. The proton yield, due to the reaction (5) was neglected since the corresponding reaction cross-section was lower by two orders of magnitude than the cross-section of the reaction (1). On the other hand, the $p\gamma$-coincidence background can be excluded entirely by suitable disposition of the proton telescope in the γ-counter. Fig. 3 shows the efficiency of the γ-counter η (in %) as a function of the γ-ray energy in MeV. The points are experimental and the curve is calculated from the formula

$$\eta = \left[1 - \exp(-2\mu T)\right] \frac{(bT - 1, y_o)!}{\Gamma(bT)} \qquad (6)$$

where μ is the γ-ray absorption coefficient for lead

(Ref. 2 - Heitler, V. - Quantum Theory of Radiation, 1956, Izd-vo IL), T is the thickness of the lead converter, $(bT - 1, y_o)!$ is the incomplete gamma-function, $b = 2.6\ cm^{-1}$ (for Pb), $y_o = \ln(E_e^{max}/E_e^{min})$, E_e^{max} is the maximum electron energy and E_e^{min} is the minimum electron energy corresponding to the threshold of the fast coincidence circuit (2 MeV). If the proton telescope records only protons with energies $E_p \pm \Delta E_p$, leaving at an angle $\theta_p \pm \Delta\theta_p$ to the direction of the primary photon beam, then the kinematics of the photo-production of π^o-meson (1) and the π^o-meson decay (2) can be used to determine the energy spread of the γ-rays recorded in coincidence with the protons.

Acknowledgements to P.A. Cherenkov for his interest and to T.I. Kovaleva for taking part in the construction of the fast coincidence circuit.

Card 5/8

27697
S/120/61/000/003/007/041
E032/E314

A Differential Method ....

There are 3 figures and 2 Soviet references.

ASSOCIATION: Fizicheskiy institut AN SSSR (Physics Institute of the AS USSR)

SUBMITTED: August 3, 1960

Card 6/[illegible]

Elastic scattering of 247-Mev...

Results are given in the Table. The error in the cross section of reaction (1) is about ± 15 %. Only for departure angles of 56 and 74° (c.m.s.) of the gamma quanta does the error amount to some 25 %. The results are in qualitative agreement with those of other publications. Discrepancies between the experimental results and theoretical calculations on the basis of one-dimensional dispersion relations are mainly due to deficiencies in the theory. The studies were made at the synchrotron of the Lebedev Physics Institute (see Association entry). The authors thank Professor P. A. Cherenkov, Professor V. I. Gol'danskiy, Doctor of Physics and Mathematics A. M. Baldin, and the synchrotron team for their collaboration. N. N. Bogolyubov, D. V. Shirkov (DAN SSSR, 113, 529, 1957), L. I. Lapidus, Chou Kuang-chao (ZhETF, 39, 1056, 1960), and N. F. Nelipa, L. V. Fil'kov (Preprint FIAN, A-2, 1961) are mentioned. There are 5 figures, 1 table, and 17 references: 9 Soviet and 8 non-Soviet. The three most recent references to English-language publications read as follows: M. Jakob, J. Mathews. Phys. Rev., 117, 854, 1960; R. Blokil et al. Phys. Rev. Lett., 5, 384, 1960; A. V. Tollestrup et al. Proc. 1960 Ann. Intern. Conf. on High Energy Physics at Rochester, p. 27.

Card 2/3

Elastic scattering of 247-Mev...

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute imeni P. N. Lebedev of the Academy of Sciences USSR)

SUBMITTED: June 9, 1961

Legend to the Table: (1) degrees, (2) laboratory system, (3) center of mass system, (4) ratio ($\times 10^4$) of the products of reaction (1) to reaction (2), (5) cm^2/steradian.

θ_p, град$^{-1}$	θ_γ, град$^{-1}$	θ^*_γ, град$^{-1}$	$\bar{\theta}_p$ (л. с.), град$^{-1}$	$\Delta\bar{\theta}_p$ (л. с.), град$^{-1}$	$\bar{\theta}_\gamma$ (с. ц. м.), град$^{-1}$	$\bar{E}_\gamma$, MeV	$\Delta\bar{E}_\gamma$, MeV	Отношение выходов ($\times 10^4$) реакций (1) и (2)	$\frac{d\sigma}{d\Omega} / \left(\frac{e^2}{Mc^2}\right)^2$, cm^2/стерад (с. ц. м.)
16	140	104	15,5	±1,65	148,0	247,7	± 5	140±12	4,17±0,35
24	121	94	23,5	±1,70	132,2	247,8	± 5	110±9,0	3,33±0,28
36	94	140	35,0	±1.70	108,8	247,2	± 5	74±8,0	3,09±0,33
44	78	—	42,5	±1,70	93,1	245,2	± 6	25,7±2,7	2,06±0,24
56	56	94	54,5	±2,0	70,3	237,0	±15	9,43±1,37	1,80±0,20
64	42	76	62,0	±2,0	54,8	232,6	±15	8,07±1,07	1,34±0,18

Card 3/3

Slovokhotov, L. I.

BARANOV, P. S.; SLOVOKHOTOV, L. I.; SOKOL, G. A.; SHTARKOV, L. N.

"Elastic Scattering of π^- -Mesons by Hydrogen at the Energy 247 MEV"

report presented at the Intl. Conference on High Energy Physics, Geneva, 4-11 July 1962

L 23745-66 EWT(1)/EWT(m) I

ACC NR: AP6007216 SOURCE CODE: UR/0056/66/050/002/0364/0366

AUTHORS: Baranov, P. S.; Slovokhotov, L. I.; Sokol, G. A.; Shtarkov, L. N. 36 B

ORG: Institute of Physics im. P. N. Lebedev, Academy of Sciences, SSSR (Fizicheskiy institut Akademii nauk SSSR)

TITLE: Refinement of the experimental values of the Compton effect cross sections for the proton 21 19

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 50, no. 2, 1966, 364-366

TOPIC TAGS: Compton effect, proton interaction, differential cross section, angular distribution, gamma quantum

ABSTRACT: This is a continuation of earlier work on the angular dependence of the Compton effect cross section for the proton at an average gamma-quantum energy of 247 Mev (ZhETF v. 41, 1713, 1961). In the present work the authors calculate the differential cross sections for the Compton effect on the proton at gamma quantum energies

Card 1/2

L 23745-66
ACC NR: AP6007216

from 230 to 250 Mev, using a more accurate analysis and making absolute the earlier experimental data. The analysis of the earlier data was with the aid of an electronic computer, so that the approximations of the original analysis could be eliminated. The more accurate values are approximately 20 -- 30% higher than in the earlier work, but the angular distribution has not changed noticeably. The total cross section obtained for the Compton effect at 248 Mev is (95.0 ± 9.3) x 10^{-32}. Orig. art. has: 3 formulas and 1 table.

SUB CODE: 20/ SUBM DATE: 01Sep65 ORIG REF: 002/ OTH REF: 004

Card 2/2 UR

SLOVOKHOTOV, Yu.P.

[Surface blood vessels of the spinal cord in the fetus and newborn] Poverkhnostnye krovenosnye sosudy spinnogo mozga plodov i novorozhdennykh. Samarkand, 1950. 3 p. (MIRA 11:9)
(SPINAL CORD--BLOOD SUPPLY)
(FETUS) (INFANTS (NEWBORN))

[illegible], . . .

"Raman Spectrum of Betaine," Dok. AN, 35, No. 5, 1942. Mbr., Sci. Res. Order Labor Red Banner Physical Chemical Inst. im. ~~[illegible]~~ -1942-.

L. Ya Karpov

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CA

Spectroscopic investigation of solutions of inorganic salts in ketones. N. A. [illegible] (Karpov Phys. Chem.
Inst., Moscow). *Zhur. Fiz. Khim.* 35, 768-78(1961).—
Infrared absorption spectra of solns. of LiBr, CaI₂, Ca-
(NO_3)₂, and ZnBr₂ in acetone and of CaI₂ and Ca(NO_3)₂ in
acetophenone are measured as well as Raman spectra of NaI
solns. in acetone in order to elucidate the nature of inorg.
salt solns. in ketones. The presence of C=C and OH vibra-
tions demonstrates the enolization occurring in these solns.
In the cryst. complex between KNO_3 and acetone, the latter
is also enolized as shown by an infrared spectrum. The pH
of the acetone solns. is: 0.1 (0.14 mol. % ZnBr₂ at 20°),
2.96 (0.14 Ca(NO_3)₂ at 20°), 5.2 (0.3 LiBr at 20°), and 7.0
(0.15 NaI at 25°). Thus the interaction between the metal
ion and the enol may be so strong that the latter dissociates,
giving a proton and the enolate of the metal. A shift of the
carbonyl group towards smaller frequencies shows associn.
by H bonding between the enol and the keto forms of the
solvent. As expected, the salts studied act as catalysts
for the reaction between acetone and I. The concn. of I
in pure acetone does not change after 65 hrs. With 0.15
mol. % ZnBr₂ in acetone at 25°, an initial concn. of iodine
equal to 20.3 × 10⁻⁴ g. mol./l. is reduced to 1.6 × 10⁻⁴ after
40 min. The catalytic action of NaI is weak, as may be
understood from the spectroscopic and pH data. The action
of LiBr and Ca(NO_3)₂ lies between that of ZnBr₂ and
NaI.

Michel Boudart

SLOVOKHOTOVA, N.A.

USSR/ Physics - Spectral analysis

Card 1/1 Pub. 43 - 30/62

Authors : Slovokhotova, N. A.; Samokhvalov, Gl. I.; Miropol'skaya, M. A.; Vakulova, L. A.; Zhukova, L. P.; and Preobrazhenskiy, N. A.

Title : Spectroscopic investigation of the mechanism of condensation reaction of beta-ionone with ethyl ether of gamma-bromocrotonic acid

Periodical : Izv. AN SSSR. Ser. fiz. 18/6, 692-693, Nov-Dec 1954

Abstract : The products of beta-ionone condensation with esters of gamma-bromo-crotonic acid were investigated in a benzene solution under the effect of metallic zinc. It was established that the reaction is concluded by total dehydration and formation of unsaturated ester. The product of beta-ionone reaction with ethyl ether of gamma-bromocrotonic acid was subjected to rectification in vacuo and the properties of the 22 fractions obtained therefrom are described. The basic condensation product was found to be an unstable ester, a product of anionotropic regrouping and dehydration of the intermediate hydroxyester. Graph.

Institution: The L. Ya. Karpov Phys-Chem. Inst.

Submitted : .....

SLOVKHOTOVA, N. A.

Application of infrared spectra to the study of intermediate products in the synthesis of vitamin A and carotene. N. A. Slovokhotova, G. I. Samokhvalov, G. M. Kunitskaya, and M. A. Mikopol'skaya. *Zhur. Obshchel Khim.* 24, 2222–30(1954).—Reproductions of the infrared spectra of several intermediates in the synthesis of vitamin A are given. Pseudoionone (either synthetic from methylheptenone or from natural citral) shows intense triplet at 1675–1690 cm.$^{-1}$, connected with the conjugated system; thus the 1675 band is probably caused by CO, the 1690 by the C:C bond, and 1635 by isolated olefin link. However, synthetic pseudoionone has a band at 1700 cm.$^{-1}$, indicating the presence of $Me_2C{:}CHCH_2CH{:}CMeCH_2CH{:}CHAc$; the synthetic product also shows more intense 882 band in comparison with the 815 band; natural product shows equal intensity of both bands; thus the synthetic material contains more cis isomer. In 3400 band region the synthetic product shows a 3-fold greater intensity of absorption than does the product from citral; this can be explained by partial enolization, which is apparently more readily attained in the synthetic product. Me β-ionolidenecrotonate was purified by adsorption on Al_2O_3, followed by elution in the form of 4 successive fractions. The pure ester used as reference was prepd. from the free acid and CH_2N_2; this showed bands at 1700 cm.$^{-1}$ (CO in ester group), 1270, 1200, and 1170 (MeO group in the ester), as well as 1140 (1 of the modes of ester group vibration); 1040 and 1020 bands are assocd. with conjugation of the polyene chain with the ester group; the cyclohexene ring is proved by 1130, 1450, and 1660 cm.$^{-1}$ bands, the latter being masked by 1700 and 1600 bands. The spectra of the 1st 3 chromatographic fractions show a wide double max., 1700 and 1720, a shifted band at 1610, which may be attributed to isomeric structures obtained by allylic and prototropic rearrangements of the initial ester; the 4th fraction shows intense max. at 3380 (OH assocd. with H-bonds), 1700, and 1585–1600 cm.$^{-1}$, indicating the formation of a side chain, $MeO_2CCH_2CH{:}CHCMe{:}CHCH{:}$, on the cyclohexene ring. The formation of isomers can be expected in the Reformatskii method of synthesis with Zn reagent.

G. M. Kosolapoff

(3)

Anionotropic and prototropic rearrangements in the synthesis of polyene compounds. G. I. Samokhvalov, M. A. Miropol'skaya, L. A. Yakulova, L. P. Zhukova, N. A. Slovookhotova, V. A. Mulyusov, and N. A. Preobrazhenskii (All-Union Vitamin Sci. Research Inst., Moscow). *Doklady Akad. Nauk S.S.S.R.* 99, 273-6(1954).—β-Ionone with $BrCH_2CH:CHCO_2R$ in C_6H_6 in the presence of Zn gave an unsatd. ester (cf. Heilbron, *et al.*, *C.A.* 41, 719g) which has a wide absorption band 290-324 mμ. Hydrolysis of the ester gave a mixt. of acids as an oil which yielded 7-20% cryst. *trans*-β-ionylideneerotonic acid, m. 161.5-2.5°, and a small amt. of the cis isomer, m. 140-1°. If the originally formed ester mixt. is fractionated at 0.1 mm. into numerous small fractions, some 20.5% of the product is β-ionone, and some 40% is material, n_D^{20} 1.5305, absorption max. 285 mμ, which is different from the Me ester formed from CH_2N_2 and cryst. β-ionylideneerotonic acid. The product thus isolated undergoes isomerization simultaneously with sapon. on treatment with bases; the isomerization is shown in the absorption spectra by a 30-mμ shift toward the longer waves caused by increased length of the conjugated system. While part of the product, treated with bases, undergoes sapon., part is transformed into another substance which is more resistant to hydrolysis and eventually yields some β-ionylideneerotonic acid. Hence the latter is formed only after isomerization (base-catalyzed) of unstable products isolated by the fractional distn. The acid isolated by hydrolysis of the ester, i.e. the readily saponifiable portion, yields with CH_2N_2 a Me ester with absorption max. 315 mμ, indicating 4 conjugated double bonds (spectrum shown); the infrared spectrum shows max. at 1595-1600 cm.$^{-1}$ and 1730 cm.$^{-1}$, which is decidedly different from Me ester of the ionylideneerotonic acid. It is suggested that the principal component of the esters formed in the initial reaction of ionone is the product of an allylic shift and dehydration of the initially formed ester of a HO acid, although the infrared spectrum has a 1715 cm.$^{-1}$ may be caused by the CO group in a structure such as $RO_2CCH:CHCMeCH_2CH$ of the side chain. The higher-boiling fractions of the original reaction products appear to be a mixt. of a product of further prototropic shift and the product described above. This is indicated by the absorption max. 1710-1705 and 1000-1015 cm.$^{-1}$, indicating a still longer conjugated chain, possibly $RO_2CCH:CHCH:CMeCH:CH$-, which is also confirmed by an absorption max. lowering at 285 mμ and increased absorption in the longer wave-length region. When all these fractions are hydrogenated over Pt and hydrolyzed, all give the same acid as is formed from cryst. β-ionylideneerotonic acid; this acid yields the pseudothiuronium salt, m. 149-9.5°. Thus the Reformatskii reaction with β-ionone leads not only to formation of esters of a HO acid, but also to isomerization and migration of the HO to the end of the conjugated chain, followed by dehydration, yielding an ester with a methylene group between systems of double bonds. Treatment with bases or heating during distn. leads to prototropic shift with lengthening of the conjugation chain, thus yielding not only esters of *trans*- and *cis*-β-ionylideneerotonic acids, but also those of 5-methyl-7-(2,6,6-trimethyl-2-cyclohexenylidenyl)-3,5-heptadienoic acid and its isomers. C. M. K.

(6)

Shevkhetova, N A

Chemical changes in polymeric substances under the action of ionizing radiations as studied by the method of spectra I Action of fast electrons on polyethylene II Action of γ-radiation on polyethylene N. A. Shevkhetova and V. I. Karpov. *Symposium on Radiation Chem* Moscow 1955. 165-73. 175-81 (Engl translation) See B M R

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Slovokhotova, N A

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Chemical changes in polymeric substances under the action of ionizing radiations as studied by the method of vibration spectra. I. Action of fast electrons on polyethylene. N. A. Slovokhotova and V. L. Karpov. *Sbornik Rabot Radiatsionnoi Khim., Akad. Nauk S.S.S.R.* 1955, 196–205.—Examn. of the vibrational spectra of polyethylene after exposure to fast electron streams (10–40 min.; 275 and 415 kv. electrons) showed that the structure of the polymer is severely altered: double bonds form, the branching of the chains increases, and the cryst. material tends to pass into the amorphous state. If the radiation is done in contact with air, oxidation also takes place yielding carbonyl and ether groups. II. **Action of γ-radiation on polyethylene.** *Ibid.* 206–14.—Irradiated polyethylene shows in its infrared spectra an increased branching of chains and the presence of cross-linked units, along with the appearance of double bonds and HO, CO, and CO_2H groups. The products are deducible from probable free radicals formed in the radiation impact. In contact with air, the process also yields carbonyl compounds, while activated O can participate in chain initiation reactions. G. M. Kovalpoff

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5.3831

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 24, p 646 (USSR)

AUTHOR: Slovokhotova, N.A.

TITLE: An Investigation of the Chemical Changes in Polytetrafluoroethylene ("Teflon") Under the Action of Ionizing Radiations by the Method of Infrared Spectroscopy

PERIODICAL: Fiz. sb. L'vovsk. un-ta, 1957, Nr 3 (8), pp 430 - 433

ABSTRACT: The infrared spectra of Teflon (I) films irradiated by fast electrons or γ-rays (Co^{60}) were studied. During irradiation in the vacuum (10^{-4} mm) by γ-rays in the spectrum of I bands are detected which pertain to isolated bonds and in the case of irradiation by electrons to conjugated double bonds. During irradiation in the air, bands appear in the spectra of I which are characteristic for C = O groups in perfluorinated aldehydes, carboxylic acids and their fluoroanhydrides, as well as for C-H and OH, which is connected with the interaction of radicals, formed during irradiation, with O_2 and water vapors. In films of I irradiated in the air by electrons the degree of unsaturation is higher than the degree of oxidation; during γ-irradiation the inverse relation is observed. This

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An Investigation of the Chemical Changes in Polytetrafluoroethylene ("Teflon") Under the Action of Ionizing Radiations by the Method of Infrared Spectroscopy

result reflects apparently the difference of ratios between the rates of formation of radicals and the absorption of O_2 from the air by Teflon, existing between both of the cases. According to the data of the infrared spectra the transition of I into amorphous state during the irradiation process is also obserbed, as well as the accumulation of CF_3-groups (branching or destruction) and probably the formation of cyclobutene rings.

A. Litmanovich

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SLOVOKHOTOVA, N. A.

"Investigation of Chemical Changes which Take Place in Several Vinyl Polymers Under the Action of Ionizing Radiation" p. 203

Truly Transactions of the First Conference on Radioaction Chemistry, Moscow.
Izd-vo AN SSSR, 1958. 330pp.
Conference -25-30 March 1957, Moscow